

Claims

1. A portable crane/winch/hoist device with longitudinal tubular adjustable sections connected in a horizontal plane on one end transitioning to round pipe at 90° vertical rise for a distance then ending with a rotatable boom section that rises

5 30° horizontally, comprising:

a tubular horizontal male section that inserts into a female receptacle in a trailer hitch and proceeds 90° outwardly and parallel to a vehicle bumper and connects to a transitional section;

10 an intermediate transition section from horizontal tubular to round rising vertically at 90° with an adjustable load bearing support on the bottom of the transition angle;

a vertical round adjustable 360° rotatable section that inserts into the vertical rise round section of the transition for a distance ascending at approximately 30° horizontally;

15 a vertical round section rising 30° horizontally, the boom end, containing a winch/motor, cable, pulley, lifting hook, power cable and switch.

2. The assembly of a portable crane/winch/hoist of **Claim 1**, wherein:

a pinned adapter section to the host trailer hitch of a vehicle and a second transition section pinned to the first adapter section for stability.

3. The portable crane/winch/hoist device of **Claim 1**, wherein:

5 the transition vertical rise member contains an adjustable load bearing, adjustable foot/base for adaptation to the terrain/ground with lock nut to secure same.

4. The assembly of **Claim 1**, includes a 90° transition rise member with a
10 pin bore through the round internal passageway located approximately 8-10 inches above the bottom of the pipe and serves as an adjustable height/roller bearing effect when employed, which aids in the rotation of the boom section.

5. A boom section that includes a handle to rotate the load horizontally while
15 suspended.

6. A boom section of **Claim 5** contains a motor/winch, cable, pulley, power cord with switch, wherein:

7. There is included one or more of the other patentable features in the specification hereof.

8. The portable crane/winch/hoist device of a second embodiment contains a tubular horizontal male member on one end being connected to a transitional member that accommodates two 360° vertical rise sections, each with a 45° horizontal rise connected to each other to form a long sweeping radius and the second terminal member being the boom section comprising:

9. The 2nd embodiment of **Claim 8** contains a first 360° rotatable member that inserts into the round pipe vertical rise portion of the transition section and rests on a roller pin:

10. The assembly of **Claim 8** has a second round boom member that inserts into the female distal end of the first section of **Claim 9**.

11. The assembly of **Claim 8** has a second round boom member that inserts into the female distal end of the first 360° rotatable member:

12. The portable crane/winch/hoist of **Claim 8** has a motor/winch, cable, pulley, lifting hook and power cord with switch:

13. The assembly of **Claim 8** contains an adjustable foot/base load bearing
5 support with lock nut on the bottom of the 90° angular tubular to round vertical rise pipe transitional member.

14. A method of assembly of **Claim 1**, 1st preferred embodiment comprising the following steps:

10 connecting the trailer hitch adapter male end to the female receptacle of the trailer hitch, pin, then insert the male end of the transition into the female end of the adapter member pin, adjust the foot/base support to the terrain, lock in place with lock nut, then insert male end of rotatable boom section to desired height either resting on the roller pin or on the bottom
15 of the pipe section.

15. A method of operation of **Claim 14**, after assembling components, attach lifting hook to object load after releasing adequate length of cable with power cord

switch, commence lifting vertically, rotating horizontally to desired location,
energize switch to lower and deposit load, remove lifting hook then energize
switch to reel in cable, disassemble portable crane/hoist then proceed to location to
unload load, using the reverse operation of the power switch, then repeat the
5 disassembly procedure.

16. A method of assembly of Claim 8, second embodiment:

connect the trailer hitch adapter member to the trailer hitch, pin, insert the
transition into the tubular end of the adapter, pin, adjust the foot/base and
10 lock in place, followed by insertion of the first vertical rise male end into
the female round pipe vertical rise member, then insert the male end of
the second vertical rise boom member into the female end of the first of
these two rotatable sections.

15 **17. A winching assembly of the 1st embodiment of Claim 1, comprises a**
horizontal perpendicular adapter/transition 90° member that inserts into the female
trailer hitch assembly, pinned and the 90° vertical rise female round pipe end

receives the male vertical rise round pipe boom section, is pinned for non-rotating stability, to direct the load in a longitudinal path to the center of the vehicle.

18. A method of **Claim 17**, using power cord switch to release winch cable
5 with lifting hook to a remote allowable location, then winched horizontally to a closer location for lifting, loading and unloading.

19. The winching device of **Claim 17** wherein:
there is included one or more of the other patentable features disclosed in the
10 specification hereof.

20. The method of **Claim 18**, using one or more steps disclosed in the foregoing specification with respect to the methodology of the invention.